2.3 AIR QUALITY

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
AIR QUALITY—Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the proposed project:**				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

SETTING

INTRODUCTION

The primary factors that determine air quality are the location of air pollutant sources and the amount of pollutants emitted. However, meteorological and topographical conditions are also important factors.

The proposed project lies completely within San Francisco. Since most of San Francisco's topography is below 200 feet, marine air is able to easily flow across most of the city, making its climate cool and windy. Pollutant emissions in San Francisco are high, especially from motor vehicle congestion. Localized pollutants, such as carbon monoxide, can build up in "urban canyons"; although the winds in San Francisco are generally strong enough to carry the pollutants away from the city before they can accumulate (BAAQMD, 1998).

The proposed project area is primarily used for commercial and industrial activities. There are some residential neighborhoods in close proximity to the proposed project area, particularly to the south. Existing emission sources within the vicinity of the proposed project include stationary sources, such as the Potrero and Hunters Point Power Plants, as well as mobile sources. The smaller stationary sources in the area, such as paint shops and small boilers, emit quantities of emissions that are substantially less than the mobile sources and the power plants. Mobile

sources include autos and trucks traveling on Interstate 280, located west of the project site, and autos and trucks traveling on nearby Third Street as well as other local streets.

The Bay Area has relatively good air quality despite its extensive urbanized area, vehicles, and industrial sources. The Bay Area's coastal location and favorable meteorology help to keep its pollution levels low most of the time. Winds within San Francisco display several characteristic regimes with winds generally flowing from the west, although often greatly influenced by local topographic features. In the proposed project area, winds generally blow out of the west-southwest, west, and west-northwest. Wind data collected within the vicinity of the proposed project indicates that winds blowing from the south, clockwise through northwest, account for approximately 67 percent of all winds observed in the proposed project area. Average wind speeds in the area are approximately eight miles per hour (NOAA, 2004).

CRITERIA POLLUTANTS

Regulation of criteria pollutants is achieved through both national and state ambient air quality standards and emissions limits for individual sources of air pollutants. Criteria air pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), suspended particulate matter (PM_{10} and $PM_{2.5}$), and lead. The proposed project is located within the San Francisco Bay Area Air Basin (Basin). The Basin covers all or part of the nine counties in the San Francisco Bay region and the airshed has been designated by the California Air Resources Board (CARB) as nonattainment for the Federal and State ambient air ozone standards, as well as nonattainment of the state PM_{10} standard. The Basin is "attainment" or "unclassified" for the other criteria air pollutants (BAAQMD, 2003). **Table 2.3-1** provides the California and the Federal air quality standards and attainment status.

As shown in **Table 2.3-2**, in San Francisco County, state and federal AAQS for PM_{10} and $PM_{2.5}$ have been exceeded in the Basin. Between 1999 and 2003, the maximum 24-hour $PM_{2.5}$ concentration within San Francisco County was 77 $\mu g/m^3$. This level was reached in 2001, as shown in **Table 2.3-2**. The maximum 24-hour PM_{10} concentration for the same period was 78 $\mu g/m^3$. This level was reached in 1999, as shown in **Table 2.3-2**. The federal 24-hour $PM_{2.5}$ and PM_{10} air quality standards were not exceeded in San Francisco County during this period. Existing and probable future levels of air quality in the project vicinity with respect to ozone, CO, PM_{10}, and $PM_{2.5}$, which are the pollutants of most concern, can be generally inferred from ambient air quality measurements conducted by BAAQMD at the following two monitoring stations: the Arkansas Street station located at 16th and Arkansas Streets measures CO, O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$, and the station located at 939 Ellis Street between Van Ness and Franklin Streets measures carbon monoxide (BAAQMD, 2004).

TOXIC AIR CONTAMINANTS

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern in California. There are many different types of TACs with varying degrees of toxicity. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases of hazardous materials during upset conditions. Health

TABLE 2.3-1
BAY AREA AIR QUALITY MANAGEMENT DISTRICT ATTAINMENT STATUS

Pollutant	Averaging Time	State[a]	National[b]	Attainment Status[d]
Ozone	1 hour 8 hour	0.09 ppm[c] NA[d]	0.12 ppm 0.08 ppm	N U
Carbon Monoxide	1 hour 8 hour	20 ppm 9 ppm	35 ppm 9 ppm	A A
Nitrogen Dioxide	1 hour Annual	0.25 ppm NA	NA 80 µg/m^3 [c]	A A
Sulfur Dioxide	1 hour 24 hour	0.25 ppm 0.04 ppm	NA 0.14 ppm	A A
Particulate Matter ($PM_{2.5}$)	24 hour Annual Arithmetic Mean	NA 12 µg/m^3	65 µg/m^3 15 µg/m^3	U U
Particulate Matter (PM_{10})	24 hour Annual Arithmetic Mean	50 µg/m^3 20 µg/m^3	150 µg/m^3 50 µg/m^3	N/U A
Sulfates	24 hour	25 µg/m^3	NA	A
Lead	30 day	1.5 µg/m^3	NA	A
Hydrogen Sulfide	1 hour	0.03 ppm	NA	A
Vinyl Chloride (chloroethene)	24 hour	0.01 ppm	NA	A
Visibility Reducing Particles	8 hour	see note [e]	see note [f]	**NA**

[a] California standards for ozone, carbon monoxide, sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM10, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded.

[b] National standards other than for ozone, particulates and those based on annual averages, are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations are 0.08 ppm or less.

[c] ppm = parts per million by volume; µg/m^3 = micrograms per cubic meter.

[d] A=Attainment; N=Nonattainment; U=Unclassified; NA = Not Applicable.

[e] Statewide VRP Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

[f] USEPA encourages state and tribal communities to participate in regional planning organizations to address visibility.

SOURCE: BAAQMD (2003)

TABLE 2.3-2
AIR POLLUTANT SUMMARY FOR THE PROPOSED PROJECT AREA, 1999–2003

Pollutant	Concentrations, by Year[a]					
	Std.[b]	1999	2000	2001	2002	2003
Ozone:						
Highest 1-hour-average concentration, ppm[c]	*.09*	.08	.06	.08	.05	.085
Number of violations[d]		0	0	0	0	0
Highest 8-hour-average concentration, ppm[c]	*.08*	.05	.04	.05	.05	.06
Number of violations		0	0	0	0	0
Carbon Monoxide:						
Highest 1-hour-average concentration, ppm	*20*	5.4	5.5	4.0	3.5	3.6
Number of violations		0	0	0	0	0
Highest 8-hour-average concentration, ppm	*9.0*	3.7	3.2	3.3	2.6	2.8
Number of violations		0	0	0	0	0
Suspended Particulate (PM2.5):						
Highest 24-hour-average concentration, $\mu g/m^3$ [c]	*65*	71	48	77	70	42
Violations/Samples[e] (days per year)		3	0	5	4	0
Annual Geometric Mean, $\mu g/m^3$	*12*	12.6	11.4	11.5	13.1	10.1
Suspended Particulate (PM10):						
Highest 24-hour-average concentration, $\mu g/m^3$	*50*	78	63	67	74	51
Violations/Samples[e] (days per year)		6	2	7	2	1
Annual Geometric Mean, $\mu g/m^3$	*20*	26	24	26	25	22

[a] Monitoring was collected from the Arkansas Street station located at 10 Arkansas Street close to 16th Street in San Francisco.
[b] State standard not to be exceeded.
[c] ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter.
[d] For ozone, "number of violations" refers to the number of days in a given year during which standards were exceeded.
[e] Indicates the number of violations and the number of samples taken in a given year.

NOTE: **Bold** values are in excess of applicable standard. NA = Not Available.

SOURCES: BAAQMD (1999, 2000, 2001, 2002); USEPA (2003)

effects of TACs include cancer, birth defects, neurological damage, and death. TAC emissions are controlled through federal, state, and local programs. Federally, TACs are regulated by the EPA under Title III of the federal Clean Air Act (CAA). At the state level, CARB has designated the federal hazardous air pollutants as TACs, under the authority of Assembly Bill (AB) 1807. Diesel exhaust is a growing concern in the Basin area and throughout California. In 1998, CARB identified diesel engine particulate matter as a TAC. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Diesel

engine particulate matter has been identified as a human carcinogen. Mobile sources (including trucks, buses, automobiles, trains, ships, and farm equipment) are by far the largest source of diesel emissions. Studies show that diesel particulate matter concentrations are much higher near heavily-traveled highways and intersections.

For the most part, emissions of TACs have declined substantially since 1997. For example, benzene levels declined substantially in 1996 with the advent of Phase 2 reformulated gasoline. Due largely to the observed reductions in benzene and 1,3-butadiene levels, the average cancer risk in the Bay Area from ambient levels of TACs has declined throughout the 1990s. BAAQMD operates a regional monitoring network that collects ambient concentration data on some of the more pervasive TACs. **Table 2.3-3** contains the mean concentrations of selected toxic pollutants monitored at the Arkansas Street station.

TABLE 2.3-3
ARKANSAS STREET STATION TOXIC AIR POLLUTANT MEASUREMENTS

Parameter	Mean Concentration Per Year[a] (part per billion - ppb)				
	1999	2000	2001	2002	2003
Benzene	4.108	2.897	2.294	3.195	2.265
1,3-Butadiene	.669	.495	.452	.638	.33
Carbon tetrachloride	.062	.065	.053	.089	.094
Chloroform	.053	.052	.05	.032	.035
Formaldehyde	1.45	1.61	1.57	1.97	1.63
Acetalodehyde	.97	1.36	1.15	1.08	1.29
1,4-dichlorobenzene	-	.669	.785	.9	.9
Ethyl benzene	2.667	2.4	1.45	1.41	1.45
Methyl chloroform	.131	.115	.057	.083	.068
Methyl ethyl ketone	.67	.71	.66	.6	.47
Styrene	.65	.44	.424	.445	.431
Toluene	11.113	10.033	7.7	11.064	8.603
Trichloroethylene	.056	.056	.05	.034	.025
Methyl tertiary-butyl ether	6.52	5.22	2.83	4.78	1.23

[a] Monitoring was collected from the Arkansas Street station located at 10 Arkansas Street close to 16th Street in San Francisco.

SOURCE: U.S. EPA (2004)

Diesel particulate matter consists of more than one compound, making monitoring more difficult than for single TACs. However, based on a limited amount of data, CARB has estimated the statewide, ambient, "population-weighted," cancer risk due to essentially all TACs, based on year 2000 emissions, at 758 in 1 million, of which 540 in 1 million, or about 70 percent, is estimated to be due to diesel particulate (CARB, 2000). That is, the average individual in the state of California has a 0.8 in 1,000 chance – beyond the risk from other sources, including hereditary factors and exposure to other substances – of developing cancer due to TACs in the

ambient air. The average risk in the Bay Area is less than the statewide "population-weighted" average since the latter is influenced heavily by the large numbers of people living in the Los Angeles metropolitan area. The average risk from ambient TACs is approximately 30 percent less in the Bay Area than in the South Coast Air Basin (i.e., the Los Angeles metropolitan area) and approximately 17 percent less in the Bay Area than that calculated for the statewide "population-weighted" average (CARB, 1998).

Hazardous materials, such as volatile organic compounds, may be located in the soils and fill materials within the project area and could become airborne during construction activities. Asbestos, which is also a regulated toxic substance, could occur naturally within deposits of ultramafic rock and serpentine rocks in the project area. These materials could be inhaled if the area is disturbed and exposure to such materials can cause health problems. Asbestos, for example, can result in asbestosis (scarring of the lung tissue) and certain types of cancer. The Occupational Safety and Health Administration (OSHA) established the first federal regulation governing occupational exposure to asbestos in 1971. Since then, the U.S. Environmental Protection Agency (U.S. EPA) and OSHA have promulgated rules and updated regulations designed to limit the release of asbestos into the atmosphere, reduce worker exposures to asbestos, regulate the disposal of asbestos, and ensure asbestos hazard response actions are carried out by qualified and trained personnel.

California OSHA (CAL-OSHA) and BAAQMD have established asbestos requirements that augment and extend the federal requirements. The Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations was promulgated by BAAQMD in 2002. This regulation generally requires notification of BAAQMD prior to specific construction activities, such as grading operations, when the activity occurs in areas where ultramafic and serpentine rocks or naturally-occurring asbestos may be found. BAAQMD regulations require that construction operations use dust control measures and prevent visible emissions crossing the project boundaries. For construction and grading projects that will disturb one acre or less, the regulation requires several specific actions to minimize emissions of dust such as vehicle speed limitations, application of water prior to and during the ground disturbance, keeping storage piles wet or covered, and track-out prevention and removal. Construction projects that will disturb more than one acre must prepare and obtain BAAQMD approval for an asbestos dust mitigation plan. The plan must specify how the operation will minimize emissions and must address specific emission sources. Regardless of the size of the disturbance, activities must not result in emissions that are visible crossing the property line.

Records related to the applicability of the regulation or compliance with the specific provisions of the regulation or the asbestos dust mitigation plan must be kept for seven years. The results of any air monitoring or bulk sampling required by BAAQMD, any bulk sampling to document the applicability of, or compliance with, the regulation, and any other records specified in the dust mitigation plan must be reported to BAAQMD.

An exemption can be granted be BAAQMD if a geological evaluation demonstrates that ultramafic or serpentine rock is not likely to be found. Removal of any asbestos containing materials must be performed by a CAL-OSHA certified, licensed asbestos abatement contractor.

If structures containing asbestos are disturbed and the material becomes friable, removal of friable materials with a concentration of one percent or greater and at a quantity of 160 square feet or 260 linear feet or greater would require notification to the Regional EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) office and BAAQMD. Removal of these materials would also require engineering controls. Disposal of asbestos and asbestos-containing material must be performed by a certified solid waste facility.

Sensitive Receptors

Sensitive populations (i.e., children, senior citizens, and accurately or chronically ill people) are more susceptible to the effects of air pollution than the general population. Sensitive populations (sensitive receptors) in proximity to localized sources of toxics and criteria pollutants are of particular concern. Land uses where sensitive receptors are typically found include residences, schools, playgrounds childcare centers, parks, hospitals, clinics, rehabilitation centers, convalescent homes, and retirement homes. The closest sensitive receptor identified is the residential development on 25th Street, Minnesota Street, and Cesar Chavez Street.

REGULATORY CONTEXT

U.S. ENVIRONMENTAL PROTECTION AGENCY / CALIFORNIA AIR RESOURCES BOARD / BAY AREA AIR QUALITY MANAGEMENT DISTRICT

U.S. EPA is responsible for implementing the myriad of programs established under the CAA which include establishing and reviewing the National Ambient Air Quality Standards (NAAQS) and judging the adequacy of State Implementation Plans (SIP), but has delegated the authority to implement many of the federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented. CARB, the State's air quality management agency, is responsible for establishing and reviewing the state ambient air quality standards, compiling the California SIP and securing approval of that plan from U.S. EPA, and identifying toxic air contaminants. CARB also oversees the activities of air quality management districts, which are organized at the county or regional level. As a general matter, U.S. EPA and CARB regulate emissions from mobile sources (e.g., vehicles and trains) and the air districts (e.g., the BAAQMD) regulate emissions from stationary sources associated with industrial and commercial activities.

CLEAN AIR ACT

Under the federal CAA Amendments of 1990, federal agencies must make a determination of conformity with the SIP before taking any action on a project. Conformity with the SIP is defined in the CAA Amendment as meaning conformity with a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. The General Conformity Rule (40 CFR 93.150) applies to general projects in areas designated "non-attainment" or "maintenance" and covers direct and indirect emissions of criteria air pollutants or their precursors that are caused by a federal action, are reasonably foreseeable, and can practicably be controlled by the federal agency through its

continuing program responsibility. However, the requirements of the General Conformity Rule do not apply if the federal action would result in a *de minimis* increase in emissions. Within the Bay Area Air Basin, these *de minimis* thresholds are 100 tons per year of O_3 precursors (ROG and NOx) and CO, equivalent to 548 pounds per day.

IMPACTS DISCUSSION OF AIR QUALITY

METHODOLOGY AND SIGNIFICANCE CRITERIA

The methodology of analysis to determine the potential impacts to air quality included a review of ambient monitoring data derived from the project area. To support the analysis, air emissions from construction activities were derived from PG&E's Preliminary Environmental Assessment (Essex Environmental, 2003). Standards of significance were derived from CEQA Guidelines Appendix G. Impacts to air quality are considered significant if the project would:

- conflict with an applicable air quality plan;
- violate any AAQS;
- substantially contribute to an existing or project-related air quality violation;
- expose sensitive receptors to a substantial pollutant concentration; or
- create objectionable odors that would affect a substantial number of people.

Sensitive air quality receptors are defined as facilities or land uses that include people who are particularly susceptible to the effects of air pollution, including children, the elderly, and people with illnesses. Schools, hospitals, and residential areas are all examples of sensitive receptors.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact AQ-1: Construction and demolition activities associated with facility construction would generate short-term emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions. This would be a less than significant impact with implementation of Mitigation Measures AQ-1. Additionally, Mitigation Measure LUP-1, provided in Section 2.9 *Land Use*, shall be implemented to minimize impacts to sensitive receptors.

Construction activities for all proposed project components could require initial clearing and grading at each site to accommodate excavation and staging activities. The types of construction equipment used, as well as the extent of the excavation and construction disturbance zone for each component would vary between locations and type of activity. Truck deliveries would be based on the type and intensity of activity at each site, as well as the amount of equipment and exported/imported material required.

Construction conducted for the project could generate fugitive dust. Fugitive dust emissions would vary from day to day depending upon the level and type of activity, silt content of the soil, and the prevailing weather. Primary sources of fugitive dust during construction would include excavation, earth movement, grading, and wind erosion from exposed surfaces. Larger-diameter

dust particles (i.e., greater than 30 microns) generally fall out of the atmosphere within several hundred feet of construction sites, and represent more of a soiling nuisance than a health hazard. But, the smaller-diameter particles (e.g., PM10), which generally remain airborne until removed from the atmosphere by moisture, are associated with adverse health effects.

The primary air pollutant from cable and switchyard construction activities is PM_{10} emissions from construction equipment and ground disturbance. In addition to PM_{10}, there are pollutants associated with construction equipment usage and vehicular emissions from transporting workers, equipment, and supplies. The estimated construction emissions for cable installation and switchyard modifications are shown in **Table 2.3-4** and **Table 2.3-5**. BAAQMD does not provide significance thresholds for construction activities, but provides mitigation measures which if implemented, air quality impacts are considered insignificant. BAAQMD's permit authority does not extend to general land use development nor does it extend to operation of on-road motor vehicles (autos, trucks, and buses). Implementation of **Mitigation Measure AQ-1** could further reduce temporary air emissions from project construction. With the implementation of BAAQMD mitigation measures, air quality impacts from construction would be considered less than significant.

Mitigation Measure AQ-1: The following measures prescribed by BAAQMD shall be implemented to ensure that construction impacts are less than significant:

- **Construction areas, unpaved access roads, and staging areas shall be watered at least twice daily during dry weather, or soil stabilizers shall be applied during active work.**
- **Trucks hauling soil and other loose material shall either be covered, have at least two feet of freeboard, or be sprayed with water prior to arriving and departing from the construction site.**
- **Construction vehicles shall use paved roads to access the construction site wherever possible.**
- **Vehicle speeds shall be limited to 15 mph or less on unpaved roads and construction areas.**
- **Paved access roads, parking areas, and staging areas at construction sites and streets shall be cleaned daily with water sweepers if excessive soil material is carried onto adjacent public streets.**
- **Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).**
- **A carpooling strategy shall be implemented for construction workers prior to commencing construction (during construction worker orientation and training). This strategy shall be submitted to and approved by the CPUC prior to commencement of project construction.**
- **Vehicles used for construction activities shall be tuned per the manufacturers' recommended maintenance schedule, if reasonably available.**

TABLE 2.3-4
CONSTRUCTION EMISSIONS ESTIMATES FOR 115 kV CABLE LINE

Activity and Equipment		Emissions (pounds per day)				
Type	**Number**	**ROG**	**CO**	**NO_x (as NO_2)**	**SO_2**	**PM_{10}**
Material Delivery and Setup						
Pickup truck	2	0.16	3.28	0.84	0.00	0.00
Rigging truck	1	0.30	4.62	0.54	0.00	0.00
Mechanic's truck	1	0.14	1.69	0.17	0.00	0.00
Small mobile crane	1	1.52	14.32	33.36	3.63	2.05
Shop van	2	0.59	9.24	1.08	0.00	0.00
2-ton flat bed truck	1	1.52	14.32	33.36	3.63	2.05
Excavation and Construction						
Crawler backhoe	1	1.52	28.72	10.16	2.79	1.25
Cement truck	2	3.42	32.22	75.06	8.17	4.61
Dump truck	2	3.42	32.22	75.06	8.17	4.61
Mobile crane	1	4.98	136.00	3.37	0.11	0.45
Transport truck	1	0.14	1.36	0.17	0.00	0.00
Wire Installation						
Cable puller truck	1	1.52	28.72	10.16	2.79	1.25
Wench truck	1	1.52	28.72	10.16	2.79	1.25
Tank truck	2	3.04	28.64	66.72	7.26	4.10
Mobile crane	1	4.89	136.00	3.37	0.11	0.45
Single-Circuit Duct Bank						
Fugitive dust from wire installation	—	0.00	0.00	0.00	0.00	56.90
Line Activity Totals (pounds/day)	—	28.68	500.07	323.58	39.45	76.90
Line Activity Totals (tons/day)	—	0.014	0.248	0.161	0.020	0.038

ROG: Reactive organic gas
CO: Carbon monoxide
NO_2: Nitrogen dioxide
SO_2: Sulfur dioxide
PM_{10}: Particulate matter less than 10 microns

SOURCE: Essex Environmental (2003)

TABLE 2.3-5
CONSTRUCTION EMISSION ESTIMATES FOR SWITCHYARD CONSTRUCTION

Activity and Equipment		Emissions (pounds per day)				
Type	**Number**	**ROG**	**CO**	**NO_x (as NO_2)**	**SO_2**	**PM_{10}**
General Construction						
Rigging truck	1	0.30	4.62	0.54	0.00	0.00
Mechanic truck	1	0.14	1.69	0.17	0.00	0.00
Structure Foundation Excavation						
3/4-ton pickup truck	1	0.30	4.62	0.54	0.00	0.00
1-ton truck	1	1.52	14.31	33.36	3.63	2.05
Truck mounted digger	1	1.20	5.28	13.52	1.30	1.11
Crawler backhoe	1	1.52	28.72	10.16	2.74	1.25
Concrete truck	1	1.52	28.72	10.16	2.74	1.25
Structure Delivery and Setup						
3/4-ton pickup truck	2	0.59	9.24	1.08	0.00	0.00
Boom truck	1	4.98	136.00	3.38	0.19	0.45
Mobile crane	1	4.98	136.00	3.38	0.19	0.45
Wire Installation						
1-ton truck	1	3.04	28.64	66.72	7.26	4.10
3/4-ton pickup truck	1	0.30	4.62	0.54	0.00	0.00
Cleanup and Landscaping						
2-ton flat bed truck	1	1.52	14.31	33.36	3.63	2.05
3/4-ton pickup truck	1	0.30	4.62	0.54	0.00	0.00
1-ton truck	1	1.52	14.32	33.36	3.63	2.05
D-3 bulldozer	1	1.52	14.32	33.36	2.78	1.32
Substation						
Fugitive dust from excavation and construction	—	0.00	0.00	0.00	0.00	12.75
Construction total (pounds per day)	—	25.25	450.03	244.17	28.09	28.83
Construction total (tons per year)	—	0.013	0.225	0.122	0.014	0.014

ROG: Reactive organic gas
CO: Carbon monoxide
NO_2: Nitrogen dioxide
SO_2: Sulfur dioxide
PM_{10}: Particulate matter less than 10 microns

SOURCE: Essex Environmental (2003)

- **Vehicle idling time shall be minimized whenever possible.**

The following control measures shall also be implemented because the construction site is greater than four acres in area and/or located near sensitive receptors:

- **Install sandbags or other erosion control measures to prevent silt runoff to public roadways.**
- **Replant vegetation in disturbed areas as quickly as possible after project completion, taking into account optimal season and survival rates.**
- **Suspend excavation and grading activity when dust control mitigation measures become ineffective due to excessive winds.**
- **Designate a person or persons to monitor the dust control program and order increased watering, as necessary, to prevent transport of dust offsite. The name and telephone number of such persons shall be provided to the BAAQMD prior to the start of construction.**

The CPUC mitigation monitor shall oversee compliance with all of the above measures during construction.

Project Operations

Operation of the proposed project 115 kV cable line would not result in any air emissions. Vehicular emissions associated with maintenance and repair of the project components would be the only sources of emissions during the operational phase. As shown in **Table 2.3-6**, using an estimated total of 1,000 vehicle miles per month (both light-duty and heavy-duty trucks) for maintenance and repairs, the total emissions during the operational phase would be considerably below BAAQMD thresholds of significant contribution of 80 pounds per day maximum for Reactive Organic Gas (ROG)[1], NO_x, and PM_{10} (BAAQMD, 1999b).

As discussed in Section 1.0 *Project Description*, the Potrero to Hunters Point 115 kV Cable Project would provide necessary internal transmission network reinforcements to the electrical transmission system serving the City in order to improve reliability, better serve load, and provide a component needed to meet the goal of closing PG&E's Hunters Point Power Plant.[2] Though not directly related to the proposed project, the result would be a decrease in air emissions in the project area.

Impact AQ-2: Project construction could result in the release of toxic air contaminant (TAC) emissions during disturbance of contaminated soils and/or serpentine rocks. This would be a less than significant impact with implementation of Mitigation Measures AQ-1

1 ROG is not a criteria pollutant, but is an important precursor to the formation of ozone. ROG combines with sunlight and oxygen to create ozone, which is a problem in the BAAQMD and in most areas of California.

2 In 1998, the City and County of San Francisco and PG&E entered into an agreement to "permanently shut down the Hunters Point Power Plant as soon as the facility is no longer need to sustain electric reliability in San Francisco and the surrounding area and the Federal Energy Regulatory Commission (FERC) has authorized PG&E to terminate PG&E's Reliability Must Run Contract for the facility." Decision (D.).04-08-046. The CPUC approved that settlement in (D.) 98-10-029.

and AQ-2. Additionally, Mitigation Measure LUP-1, provided in Section 2.9 *Land Use*, shall be implemented to minimize impacts to sensitive receptors.

Hazardous materials, such as volatile organic compounds, may be located in the soils and fill materials within the project area and become airborne during construction activities. Asbestos, which is also a regulated toxic substance, could occur naturally within deposits of ultramafic rock and serpentine rocks in the project area. These materials could be inhaled if the area is disturbed and exposure to such materials can cause health problems.

TABLE 2.3-6
OPERATIONS EMISSIONS ESTIMATES

Equipment	Emissions (pounds per day)				
	ROG	CO	NO_2	SO_2	PM_{10}
Equipment					
Light-duty truck (800 miles per month)	0.08	1.64	0.42	0.00	0.00
Heavy-duty truck (200 miles per month)	0.04	0.62	0.08	0.28	0.16
Switching Station and Powerline					
Operation totals (pounds per day)	0.12	2.26	0.50	0.28	0.16
Operations totals (tons per day)	0.00006	0.00114	0.00026	0.00014	0.00008

ROG: Reactive organic gas
CO: Carbon monoxide
NO_2: Nitrogen dioxide
SO_2: Sulfur dioxide
PM_{10}: Particulate matter less than 10 microns

SOURCES: EPA (1985a); EPA (1985b); Essex Environmental (2003)

Mitigation Measure AQ-2: In addition to implementation of Mitigation Measure AQ-1, the following measures prescribed by BAAQMD shall be implemented to ensure that TAC emissions from construction activities would be less than significant:

- **Notification to BAAQMD of construction activities, such as grading operations, when the activity occurs in areas where ultramafic and serpentine rock or naturally-occurring asbestos may be found, shall be required.**
- **Ensure that construction operations do not result in visible emissions crossing the project boundaries in areas where hazardous waste or serpentine rocks exist.**
- **Construction projects that will disturb more than one acre of asbestos containing material shall prepare and obtain district approval for an asbestos**

dust mitigation plan. The plan shall specify how the operation will minimize emissions and must address specific emission sources.

- **Removal of any asbestos containing materials shall be performed by a CAL-OSHA certified, licensed asbestos abatement contractor.**
- **If structures are disturbed containing asbestos and the material becomes friable, removal of friable materials with a concentration of one percent or greater and at a quantity of 160 square feet or 260 linear feet or greater shall require notification to the Regional EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) office and BAAQMD.**
- **All handling and disposal of toxic materials shall be performed by a certified solid waste facility.**

CHECKLIST IMPACT CONCLUSIONS

a) Since all air pollution emission sources would be operated within permitted limits, the proposed project would not conflict with or obstruct the implementation of air quality plans in the BAAQMD.

b) The proposed project would not violate any air quality standard or contribute to an existing or projected air quality violation.

c) During construction of the proposed 115 kV cable line, there would be a temporary increase in the following criteria pollutant emissions:

- PM_{10} from fugitive dust emissions during clearing, boring, and trenching operations
- Exhaust emissions from construction equipment, including the criteria pollutants carbon monoxide, sulfur dioxide, nitrogen oxides and PM_{10}.

The short-term air quality impacts from construction activites would be less than significant with implementation of **Mitigation Measure AQ-1**.

Project operations would not result in a significant cumulatively considerable increase of any criteria pollutant emission for which the region is in nonattainment.

d) Emissions from construction activities would cause increases in ambient air particulate matter concentrations at sensitive receptors near the proposed 115 kV cable route. Construction dust is composed primarily of large particles that settle out of the atmosphere with increasing distance from the source. About one-third of the dust generated by construction activities consists of PM_{10} in the range that can be inhaled by humans, although these particles are generally inert. Persons with respiratory diseases who may be immediately downwind of the construction activities could be sensitive to this dust. Therefore, the short-term PM_{10} air quality impacts from fugitive dust during construction would be significant unless mitigation measures prescribed by BAAQMD are

implemented; however, this project impact would be less than significant with implementation of **Mitigation Measures AQ-1 and AQ-2**.

e) It is unlikely that the proposed project would create odors that would affect a substantial number of people. There are no odor complaints with regard to the existing facility and operations in the future are not expected to result in increases of odorous pollutant emissions.

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